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WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

•r• 46148

1 2 1941

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REPORT FOR THE WEEK ENDING APRIL 12,1941.

HAVRE:

The mean temperature during the period was about 5° above the normal, although minimas were below 32° on the first ten days. A good shower totaling 0.86 inch occurred on the 10th and 11th. No soil drifting has been apparent at the station.

Fall plowed plats in the DLA field were worked down. The land for the corn varieties, corn nursery, date of planting corn and sorgo, and potato rotations was spring plowed and worked down. Grasses and alfalfa in rows were cultivated. The first date of seeding small grains was made, and weeds were burned from the crested wheatgrass plats sown in 1939. Excavating dirt and leveling the artificial erosion project on old land was completed.

A home-made irrigation pump was installed, and 15 acres of alfalfa land that lies away from our regular ditch was irrigated. Raking and burning weeds from all farm fields and irrigation ditches was accomplished. Crested wheatgrass in rows was cultivated, and Ladak alfalfa in the west field was duckfooted crosswise and cornerwise in order to thin the stand. Commercial fertilizer tests were laid out and fertilizer was applied on the above alfalfa field and also on the red clover seeded in rows. With the cooperation of Torlief Aasheim of the Soil Conservation Service, 72 one-acre plats were laid out in the west field to be used in a cooperative study on methods of handling trashy cover.

W.P.A. have started building a fence around the 400 acres adjacent to the station which was recently leased. About 600 trees were planted in the yard beautification project. Work continued on the installation of the heating plant in the office and the duplex dwelling.

Livestock are doing fine, calving is progressing normally, having 48 calves dropped to date and with no casualties.

Maximum temperature, 62°; minimum, 22°; precipitation 0.91 inch.

JUDITH BASIN:

During the period two rains were received which totaled 0.16 inch. Spring plowing was begun in the rotation plots. Crested wheatgrass in rows and many shelterbelt blocks have been cultivated.

Steers for the summer pasture experiment arrived at the station on Thursday. Again they are yearling Hereford calves and are a thrifty group of individuals, averaging around 465 pounds each. They have been clipped and numbered, and initial weights will be taken early next week. Two groups will be placed on crested wheatgrass pasture which will be ready for grazing next week.

The summary of the Winter Feeding and Pasture Experiment using four lots of 8 steer calves each is as follows:

JUDITH BASIN, contd.:

	Fairway cut before bloom Lot A	Standard cut before bloom Lot B	Standard cut after bloom Lot C	Mature crested wheatgrass pasture 17 acres Standard, 8½ acres Fairway Lot D
Initial weights 1/	451	452	449	453
Spread	365-520	385-522	398-508	402-507
Final weights 1/	633	603	594	562
Spread	518-700	557-700	505-707	485-642
Average lot gain	182.5	151.5	144.5	109.1
Spread per head	153-243	119-185	78-217	80-147
Average daily gain per head	1.52	1.26	1.20	0.91
Hay consumed daily per animal	10.9	10.3	10.3	17 plus
Pellets fed per head per day	2.98	2.98	2.98	2.98
Total salt used per lot	58	39	42	41
Salt per head per day	.6	.4	.4	.4

1/ Average of individual weights on three consecutive days. Test began November 19, 1940, closed March 19, 1941, - 120 days.
Maximum temperature, 61°; minimum 16°; precipitation 0.16 inches

HUNTLEY:

Cloudy and chilly weather with several light showers and traces of snow marked much of the 12-day period. The last few days, however, were warmer and brighter. Tillage and seeding operations were carried on when conditions permitted, with the result that planting of small grains in the rotations has been completed, and most of the early crops in the pasture, grain variety, seed alfalfa and grass experiments in other fields have been sown. With few exceptions, very good seedbeds were obtained.

Winter wheat and rye are now growing well. Stands on many plots have been increased by the emergence of spring-germinated seed. These plots also have a good growth of weeds coming up along with the wheat. Crested wheatgrass on all plantings would now furnish excellent grazing.

Maximum temperature, 69°; minimum, 21°; precipitation 0.43 inch.

SHERIDAN:

Field work was general throughout the week of the 5th. Early bulk seedings, except one field, and preparation of the rotation field for seeding were completed. Rain from the 6th to the 8th prevented any further field work of consequence until the 11th, when wheat and barley were sown in the rotations. Oats in the rotation check plots and a second date of seeding small grain are being sown this morning.

Fall-sown grain came through the winter with no killing noticeable and has started a good growth. Weeds also have started thick, there being more fanweed this year than has been noted since the '20s. On account of much weed seed having germinated in the rotations since they were harrowed last week, plots in that field are being harrowed again after seeding. Soil samples taken at random this morning showed moisture to a depth of from 15 to 18 inches in stubble. This is about the same as last year before any rains were received in April. Temperatures averaged slightly above the station average for the period the first 11 days of the month. While there were a few days with high wind, wind movement was below the average.

Maximum temperature, 67°; minimum, 26°; precipitation 1.92 inches.

DICKINSON:

Frequent rainfall and wet soil retarded field work during most of the period. During the full week from the 4th to the 10th, inclusive, the weather was cloudy with fog, mist, drizzle, sleet, rain, or snow every day. This was mostly light rain with 0.26 inch the morning of the 7th, the most recorded in a day. Total precipitation during the week was 0.63 inch.

Wheat was seeded on the main field on April 3, ten days earlier than the 34-year average date of seeding these plots. Wet weather prevented further seeding until the 10th to the 12th when the rest of the wheat, oats, barley, field peas, alfalfa, sweetclover, and crested wheatgrass were seeded. The seedbed was in the best condition for several years.

As a result of warmer weather near the end of the week, early grasses greened up rapidly. Some evergreens were transplanted about the grounds.

Maximum temperature, 68°; minimum, 19°; precipitation 0.73 inch.

MANDAN: (Arboriculture)

Field work commenced on April 3 with the digging of Chinese elm nursery stock. Conifer stock has also been dug. Land has been worked down, and the first seeding was done April 11. Soil moisture conditions are favorable in the surface layers at least. Buds on poplar species are swelling and will break in the near future. Considerable winter burning has taken place on cedar and spruce trees. Most of this injury has shown up in the past two to three weeks.

(Horticulture)

Clear weather at the end of the week permitted the starting of field work. Mulch is being hauled away from the trees and land prepared for spring planting. Inside work included painting field stakes and making zinc labels for horticultural cooperators. Routine work such as potting of flower plants and transplanting of vegetable plants has been carried on in the greenhouse.

MANDAN, contd.:

(Agronomy)

The only field work started so far began the 12th. Wet snow of 1.5 inches fell on the 4th, followed by five days of light rains. All the moisture soaked into the soil. The soil is now wet to a depth of about 20 inches under grain stubble, about 16 inches on corn ground, and 11 inches on fall plowed land. Soil is now in excellent condition for preparation of seedbeds.

Grass has been slow in starting, and crested wheatgrass was just nicely started on the 10th.

The warmest day was on the 11th, with a fairly high wind. Maximum temperature, 74°; minimum 20°; precipitation 0.87 inch.

ARCHER:

The weather during the first week of April was stormy and rather cool. The precipitation during this period totaled 1.94 inches. The precipitation was mostly snow without sufficient wind to cause drifting.

These conditions delayed plant development and field operations but the moisture is probably more important than either of the delays. The plowing of the rotation plots has been resumed, and the seeding of the Soil Conservation Service grasses is in progress.

Lambing at the station is nearly complete. The average for the flock of ewes over one year of age is 140 percent. About one-half of last year's lambs are also lambing.

Maximum temperature, 62°; minimum, 22°; precipitation, 1.95 inches.

NORTH PLATTE:

April 1 was very windy and was the first day for this year when there was any appreciable soil movement. This dust storm was followed by the first good spring rain. A little over an inch of water fell during twelve hours. High winds were also recorded on April 5 and 10.

13 plots of grass, 6 plots of sweetclover, and 3 plots of alfalfa were seeded on April 7. All old plots of brome, alfalfa, and sweetclover were reseeded. Spring wheat has been seeded in 35 winter wheat plots which had a very poor survival of plants. This is nearly one-third of all the winter wheat plots. Of the plots reseeded, 15 were summer tilled, 6 fall plowed, 12 disked, and 2 after potatoes. There are several other plots particularly after corn that have poor stands but were not reseeded.

The station was host to 470 Smith-Hughes boys and their instructors from 31 western Nebraska schools at the annual judging contest.

Dr. K. S. Quisenberry inspected the wheat on the station on April 11.

Maximum temperature, 74°; minimum, 29°; precipitation, 1.10 inches.

AKRON:

Rains the first of the month further delayed seeding. The rotation plots were finally planted as follows: Peas April 1, barley and spring wheat April 5, and oats April 7. Dr. D. W. Robertson came down the 9th and seeded the Cereal Nursery and supervised the seeding of the variety experiments. Dr. K. S. Quisenberry met Dr. Robertson here the 10th, to inspect the cereal plantings.

AKRON, contd.:

Oats planted on the bean variety land March 19 is emerging. Army cutworms are not numerous enough to prevent such crops from emerging, as they did in 1925. The most of these worms are now in about adult stage, so it seems as though a major outbreak would not be experienced. They are, however, a concern for numerous farmers, principally from the area southwest of Akron.

Winter wheat is in excellent condition on all methods of soil preparation. Cutworms have pastured it rather severely in spots, but probably have done no serious damage. Plowing and preparing the row-crop rotation plots is now in progress. Some trimming of alleyways in the nursery has also been done.

A group of Nebraska and Colorado conservation students visited the station Saturday. The Nebraska group were under the guidance of Dr. Condra. Alvin Kezer and Lindsey Brown supervised the Colorado group.

Maximum temperature, 73°; minimum, 25°; precipitation 0.97 inch.

COLBY:

The wind came up gradually in the morning of April 1 and by noon had developed into the worst dust storm since 1939. The wind velocity averaged 40 miles per hour on the 8-foot anemometer for the period from 8 A.M. to 6 P.M. Most of the time during the afternoon the velocity was above 45 miles per hour. The surface soil was in ideal condition to blow and did so where not covered with a fairly heavy growth of wheat or stubble. Russian thistles moved across country in a constant procession piling high in fences and on the north sides of buildings, although the wind was from the south. Road ditches were filled in many places with dust, and shocks of feed still in the fields were partially covered with drifting soil. A few fields of wheat blew out, but on most fields the growth was so heavy that the only damage done was the browning of the tips of the leaves by the moving dust. Most of the time the visibility was about an eighth of a mile.

Intermittent showers started early in the evening, and rainy, misty, foggy weather continued for three days with about a quarter inch of snow on the morning of the 3rd. Since then it has been somewhat windy most of the time with considerable wind and dust and some soil blowing the last two days. The last 24 hours have been the windiest of the year, averaging 24.3 miles on the 8-foot anemometer, .1 mile higher than on April 1. The wind did not blow as hard as on the 1st, but continued through the night.

Soil samples showed moisture down to a depth of from 14 to 20 inches on cropped land and about 40 inches on fallow. The soil is very mellow, especially in stubble. In plot 571 A, which has not been plowed or otherwise tilled since the fall of 1930, the soil tube was pushed down a foot by hand. On fallow and plowed plots this was possible only to the depth of plowing.

The small grain plots were drilled before the dust storm got bad on April 1. Owing to the rather cold weather, the seed bed being cold, they are not up yet. The thistles, however, are coming from the seed scattered just before the showers on the evening of the 1st.

Maximum temperature, 81°; minimum, 27°; precipitation, 0.65 inch; snow .2 inch.

HAYS:

The weather has been generally warm and very damp. It has been cloudy or part cloudy most of the time and showers have occurred on four days. Although below three or four feet the sub-soil is still dry, the sub-surface soil is sticky wet. Only about two inches of the top soil has been dry enough for tillage work a few days. Because of the condition of the sub-surface soil, spring plowing for row crops has not been done. It has been difficult to get the trimming of the winter wheat plots done satisfactorily.

All vegetation not too badly injured by the November freeze is starting new growth. The pastures are green, however, most of the green at this time is weed growth and little barley. The buffalo grass, however, is starting nicely. Alfalfa on the bottom land is making a good growth, and winter wheat is making a rapid growth. Wheat seems more advanced than usual. On the other hand, trees generally are slow. Looking at the timber along the creek one sees only an occasional tree that shows a tinge of green.

Oats, barley, and spring wheat are now up to a fair stand. More plants are emerging and prospects are good for a full stand.

The field work has been confined largely to that of trimming plots, cultivating roads and alleys, and rebuilding ditches and dikes for protection of the plots against flooding in case of heavy rains.

Maximum temperature, 78°; minimum, 30°; precipitation - total of 4 showers - 2.26 inches.

GARDEN CITY:

Rank growth of wheat on fallow, coupled with exceedingly high winds and little precipitation, is threatening to lower anticipated wheat yields. September 2 date of planting is wilting perceptibly during the day. This week has been one of high winds. The average wind velocity for one 34-hour period was 22 miles per hour. Considerable dust was blowing, particularly along roadsides and in cultivated fields where no cover was present. It was necessary to cultivate three fallow plots on the Annex to control blowing.

Field work consisted of spring plowing and listing according to the April 1 schedule; listing the continuous milo plots on the Basin Lister Project, and taking soil samples on the winter wheat plots.

Maximum temperature, 78°; minimum, 27°; precipitation 0.07 inch.

TUCUMCARI:

Vegetation is well advanced as the result of heavy March precipitation and unusually warm weather the past few days. Fruit blooms and buds have not been frost damaged, as the last frost occurred on March 27. Livestock wintered in good condition, and ranges are starting growth unusually early.

Cutworms on the wheat fields south of Tucumcari are now about half grown and are taking heavy toll of some fields where it was thought vigorous growth and abundant soil moisture might enable the plants to withstand worm attack with but little injury. Late wheat continues to be injured by worm attack and high wind movement, where the fields have not been abandoned and listed.

Station work has included tree planting, clean-up, early-listing, and painting of implements.

Maximum temperature, 80°; minimum, 34°; precipitation, none; wind velocity, 8.3 m.p.h.

BIG SPRING:

Temperatures during the first part of April have been very mild with very little high wind to start soil movement. Peaches and apricots were thinned considerably by a freeze in March, but the trees appear to have sufficient blossoms uninjured to produce a fair crop. Although the normal date for the last frost is March 28, several killing frost have been received at this and later dates.

Winter wheat plots have made a fine growth and are now heading; with normal rains in April, they should produce one of the few better than average yields.

Station work has consisted of plowing and listing plots, leveling certain spring worked plots, and planting some increase Sudan grass. A large acreage of Sudan grass has been planted for grazing throughout the county during the past week.

Maximum temperature, 81°; minimum, 39°; precipitation none.

LAWTON:

The dry weather that prevailed throughout March continues, the last rains of any consequence having fallen during the latter half of February. A few scattering showers in March totaled 0.34 inch, and April precipitation to date amounts to 0.02 inch. Temperatures since the first of the month ranged from a minimum of 35° to a maximum of 81°. There have been several days of rather high wind velocity, and the surface soil has become quite dry.

Fall-seeded oats, barley, and wheat have grown very rapidly and draw in heavily on the soil moisture in the first foot or two of soil. Weed growth has been quite active the past two weeks, but native grass has come on very slowly. Corn planted in the rotation plots April 2 is well sprouted and needs additional surface moisture to insure emergence.

The first flight of chinch bugs from winter quarters was observed April 9, which is about 2 weeks later than normal. The first count of the bugs in small grains following this initial flight showed that the infestation was localizing much more heavily in spring planted barley and winter barley than in wheat or oats.

A few scattered reports of Green bug damage continue, but injury is confined to fields of volunteer oats.

WOODWARD:

Weather conditions from April 1 to 12 were generally favorable for field work. However, precipitation was considerably below average, and drying winds at the close of the period depleted surface moisture to some extent. There were no important extremes of temperature, the mean of 57° being 3° above normal.

The condition of winter wheat and small grains continues very good, and with warmer weather growth has been rapid. Plots and nurseries were trimmed and roadways cultivated. Western wheatgrass sown in March in deferred rotation 41d emerged to a satisfactory stand. Three additional deferred rotations seeded to other grasses at a later date need surface moisture for uniform germination. A few areas having thin stands in the long-term grass rotations were reseeded. Cyanogas treatment of red ant hills and poisoning gophers has been necessary in some parts of the D.L.A. project. Several Chinese elm trees along the northwest border of Field A have been removed on account of competition with certain rotations. Samples indicate a lateral spread of roots at least 70 feet from one of the largest trees and penetration to a depth of 13 feet near the base.

WOODWARD, contd.:

A second date of planting tomatoes under various types of protective covers has been made. Blocks of perennial ornamental flowers were worked over and increase material was set out. Early varieties of iris, narcissus, and some species of tulips are blooming. Shipment of nursery stock for experimental cooperative plantings was practically completed, and lining out material in observation blocks and rows is well along. Many trees and shrubs now in various stages of bloom include species of Cercis, Prunus, Cydonia, Amelanchier, Forsythia, Mahonia, Daphne, Spiraea, flowering peaches, lilacs, and others.

Routine seeding in various regrassing experiments has been in progress, and transplanting selections and strains of a number of native species continues. Dry surface soil necessitated watering the transplanted material, however, subsoil moisture is ample. Cooperative regrassing demonstrations are now being made in several western Oklahoma counties.

John B. Sieglinger and Laddie Joe Elling, during the past two weeks, have been preparing sorghum seed for experimental plantings at Woodward, Stillwater, Lawton, and Goodwell. Mr. Elling, Agent, Division of Cereal Crops and Diseases, will be in charge of the sorghum project at Woodward.

Maximum temperature, 81°; minimum, 34°; precipitation 0.03 inch.

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NOTE

The Division of Dry Land Agriculture moved March 27, from the West Wing, Administration Building, Department of Agriculture, and is now located in rooms 218-222, North Building, Beltsville Research Center, Beltsville, Md.

Mail will continue to be addressed to the Department, Washington, D.C., as formerly.

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REPORT FOR THE WEEK ENDING APRIL 19, 1941.

HAVRE:

Unsettled weather characterized the greater part of the week. Melted snow was measured on the mornings of the 16th and 17th in a total amount of 0.31 inch, however it was impossible to get an accurate measurement on snowfall since it melted quite rapidly. At no time was there even an inch of snow on the ground. Minimum temperatures were below 32° on five nights.

Field work was possible on only two days. Spring wheat was seeded in the west farm field. Certain cultivations were accomplished in the experimental field. Fencing the tract of land recently leased from the State is now practically completed. Another 500 trees were planted on the campus, which completes this particular phase of W.P.A. work this spring. The renovation of the office and living quarters also was in progress.

Maximum temperature, 70°; minimum, 23°; precipitation, 0.33 inch.

MOCCASIN:

Winter finally arrived in this area, and during the mid-week a heavy snow formed drifts around buildings, fences, and shelterbelts, and blocked roads. Summer fallow was blown comparatively clear, but stubble is holding some snow. The storm brought 0.63 inch of moisture, some in the form of rain but most in snow. With a sudden change in temperature there may be some run-off. The storm was the hardest on sheep as lambing is in process, however, many bands in this area have already dropped.

The 36 yearling Hereford steers for the 8th summer pasture trial were weighed and divided into their respective groups at the beginning of the week. The animals, again this year, are from the Hughes Livestock Company and are a thrifty group which average 476 pounds each. Two groups of 12 each could not be placed in their respective 23.6-acres crested wheatgrass pastures (regular and rotation) because of the storm although the grass was ready. The other two groups of 8 and 4 animals each will be put on bromegrass and native grass as soon as these pastures are ready for grazing.

The Montana Experiment Station Bulletin 388, DRY LAND PASTURE EXPERIMENTS AT THE JUDITH BASIN BRANCH STATION has been received from the printers, and copies are being sent to those requesting this information. The bulletin summarizes all station pasture experiments and gives in detail the results of the recent and still active grazing experiment in which crested wheatgrass is compared with native range and bromegrass. Anyone wishing a free copy of this bulletin may obtain same by writing either this station or the Montana Experiment Station, Bozeman, Montana.

Maximum temperature, 66°; minimum, 9°; precipitation 0.63 inch.

HUNTLEY:

General field work was carried on during the first half of the week, but a heavy blanket of snow halted all tillage and seeding operations for the remainder of the period. Beginning Wednesday night a wet snow fell for a period of about 48 hours, at one time reaching a depth of about 15 inches. This cover has settled to a depth of 8 inches at the end of the week. The snow has melted from the bottom so that the lower 3 to 4 inches is little more than slush. Relatively low night-time temperatures have retarded run-off to some extent, but considerable moisture loss from this source may be expected as a result of the April weather and rapidly climbing temperatures today.

The precipitation should insure ample soil moisture for germination and seedling growth of crops now planted and should aid in the preparation of seedbeds for late crops. Winter wheat, alfalfa meadows, and grass pastures and ranges should be benefitted where run-off can be checked.

Maximum temperature, 67°; minimum, 16°; precipitation 1.60 inches.

SHERIDAN:

A slow rain falling all day and well into the night of the 13th prevented any field work over the next three days, and snow squalls over the last two days were just sufficient to prevent any seeding. There was very little growth of any vegetation. The remainder of the rotation plots that were seeded were harrowed, and Russian thistles were cleared from some of last year's grass seedings. Sheep were weighed and taken to the pastures. Moving of spruce trees in the 1927 shelterbelt, where thinning is intended to be done, was started. On the south side of the trees the ground was found to be dry below about 8 inches, after all the rain that has been received.

Rainfall so far this month now exceeds that of last year, 4.39 inches to 4.17 inches last year, which was the 2nd highest yet recorded here for April, and rainfall for the year is now slightly in excess of the average to the last of April. However, moisture has not penetrated the soil as deeply as it had last year, when there was considerable moisture from melting snow with no run-off, as compared with practically no winter moisture this year.

Maximum temperature, 55°; minimum, 24°; precipitation, 2.47 inches (2.25 inches on the 13th)

DICKINSON:

Cool, cloudy, and rainy weather delayed field work. Rain amounting to 0.68 inch on Sunday and Monday morning made the soil too wet early in the week, then light showers on three other days kept the soil too wet for tillage or seeding more than half the week. Temperatures were near or slightly below freezing each night. Wheat, oats, and barley varieties and the crop-weather series of plots were seeded. Transplanting of trees was continued. Some pruning was done in the orchard and hedges were trimmed. Early grasses are making a nice start. Crested wheatgrass is now far enough along to pasture.

Wet weather has held back seeding in the district so that it is believed not over half of the acreage of wheat, oats, and barley has been seeded. On heavy soils no seeding at all has been possible.

Maximum temperature, 62°; minimum, 27°; precipitation 0.90 inch.

MANDAN: Arboriculture.

Shipping of nursery tree stock to cooperators commenced the first of the week and has continued all week. Stock came through the winter in good condition, with the exception of "burning" on blue spruce. American and Chinese elm are now in blossom, 10 days to two weeks later than usual.

Horticulture.

Field work started during the week with the planting of the nursery and seedlings in the breeding blocks. The moisture content of the soil is favorable to a good stand. Straw mulch has been hauled away from the trees that were thus protected during the winter and grapes have been uncovered.

Agronomy.

Field work was delayed by dampness. The rotation plots were all prepared and ready for staking. The weather remained cool, with a few flurries of snow.

Maximum temperature, 68°; minimum, 29°; precipitation, 0.48 inch.

BELLE FOURCHE: (week ending April 12)

The weather was cool and cloudy most of the period, but the last three days were comparatively warm. A light rain was received on April 1, and 0.42 inch precipitation was recorded from a slow, drizzling rain on April 5, 6, and 7. The rains materially improved surface soil conditions, and adequate moisture now is available for the germination of early seeded crops. Moisture has penetrated to a depth of over 10 inches on small grain stubble land, and from 4 to 8 inches on corn stubble ground.

Plant growth was retarded by the cool, cloudy weather and made little progress until the last few days. Alfalfa and sweetclover resumed growth, and crested wheatgrass made rapid advancement. Crested wheatgrass and bromegrass seeded early in February is coming up. Fall grain suffered considerable damage from pheasants on one or two plots, but otherwise it is making normal recovery, and satisfactory stands apparently will be obtained.

Field work was commenced on the dry-land rotation field on April 10, when grain stubble land finally became sufficiently dry to permit plowing. Duckfooting, plowing, disking, and harrowing of the various plots was completed, and the field was staked for seeding.

Maximum temperature, 70°; minimum, 25°; precipitation, 0.59 inch.

BELLE FOURCHE:

The outstanding feature of the week was an exceptionally heavy rain on April 13 and 14, in which 3.12 inches precipitation were received in 27 hours, 3.04 inches being recorded the first day. Excessive run-off occurred, and the flood waters did some damage to plots and fields which were seeded or had been prepared for seeding. Most of the streams overflowed their banks, but comparatively little damage was done, and the rain generally was of great benefit throughout the section. Additional rains on April 15 and 16 and a light snow on April 18 prevented drying of the soil. The total precipitation for the month to date is 4.02 inches, which is 0.10 inch in excess of the previous maximum amount recorded for April in the 33 years of record.

High winds were of almost daily occurrence and prevailed during the various periods of precipitation. The surface soil was pack-

BELLE FOURCHE, contd.:
ed hard, and a heavy crust will doubtless be formed when the soil dries.

Abnormally cool weather retarded plant growth. Grass made some improvement, but crops generally remained practically at a standstill.

Maximum temperature, 57°; minimum, 26°; precipitation, 3.43 inches.

ARCHER:

The weather during the week was cold and stormy. Sudden snow, rain, and hail squalls of considerable intensity occurred. To date the total precipitation during April is 2.99 inches.

These conditions prevented field operations, therefore the burning of weeds was undertaken. The soil is very wet and, due to low temperatures, quite cold. Last night the temperature, 20°, was sufficiently low to cause a firm frozen surface on soil not covered with snow.

Spring tillage in this section had just started at the close of last week, but none has been done this week. At the station about half of the rotation plots have been plowed and duckfooted. About 12 acres of the Soil Conservation Service grass pasture experiment have been seeded. Only a small portion of the Soil Conservation Service nursery remains to be seeded.

Maximum temperature, 67°; minimum, 20°; precipitation, 1.04 inches.

NORTH PLATTE:

The weather during the week was quite stormy and little field work was done. A high wind Saturday night caused considerable soil blowing and in this area several fences were torn out due to the piling up of thistles. A maximum wind velocity of 74 miles per hour was reported at the air-port, and at this station several A-style hog houses in the swine project were overturned or carried several feet. All these houses were in use but the animals were not injured. The windstorm was followed by a thunderstorm and a good rain. A light drizzle fell all Tuesday afternoon. Another good rain Thursday night was followed by intermittent snows yesterday and today. The precipitation for the week was 1.99 inches, and the total for the month to date 3.01 inches. This month's precipitation to date is only one inch below the total recorded for the 6-month period from October to March.

Spring soil sampling was started this week, and at the time of sampling early in the week there was moisture in the first 2 feet of the stubble plots and there was only about 6 inches more moist in the fallow plots.

The spring small grains have emerged and are making good growth. The spring wheat seeded in the poor winter wheat plots has emerged.

Maximum temperature, 76°; minimum temperature, 30°.

AKRON:

Field work was possible early in the week, and the preparation of the plots for corn and sorghum was completed.

Increase crops, seeded early across the railroad, were emerging early in the week, and were being pastured-off above the groundline by army cutworms. Inclement weather set in before poison bait could be scattered over this land. Rotation early spring-seeded plots are also emerging by this week end, where the worms are not

AKRON, contd.:
so numerous. Across the railroad, they migrated to the seeded areas from the range land.

Winter wheat and rye are growing very rapidly. The station is again having trouble breaking roadways through the series containing those crops. There are numerous enquiries about pasturing the winter wheat, which are being referred to the Hays station.

It has been very hard to get spring wheat, oats, and barley seeded in good season this year, and the acreage in these crops may be curtailed in favor of beans, proso, grain sorghums, and corn.

April thus far has recorded 2.01 inches of precipitation. There was one brief period early this week, when variable direction, hard driving winds created some local soil blowing.

Maximum temperature, 80°; minimum, 23°; precipitation, 1.04 inches.

COLBY:

This week was wet and variable. Precipitation was recorded every day but two. A hard rain fell over this section of the State before dawn Easter morning. It was accompanied by a high wind, and a tornado in three of the counties to the west. Tuesday and Wednesday were misty and rainy. Thursday was a beautiful summer day, but that night a hard shower was accompanied by some small hail which were still in evidence on the south side of buildings in the morning. No damage was done to crops. Intermittent showers continued through most of Friday. The temperature continued to drop and toward morning today it began to snow. It looked as though a blizzard was in the making, but the weather cleared somewhat this afternoon. By 8 o'clock this morning 3 inches of snow had fallen.

The spring small grains came up the first of the week but have not made much growth. Winter wheat, on the other hand, has been making rapid growth. On most fields it is big enough to hide a rabbit. Never has winter wheat looked more promising at this time of year. Thistles have come up thick in stubble fields.

Maximum temperature, 76°; minimum, 28°; precipitation, 2.37 inches; snow, 3 inches.

HAYS:

Cloudy, damp weather continues. Measurable quantities of precipitation were recorded four days and a trace of precipitation on another day. As this report is being written this morning (11 o'clock) it is snowing like real winter time.

The storm started during the night with a light shower of rain that turned to snow before morning and the temperature is now standing at about 32°. The snow is very wet and heavy.

Barley, oats, spring wheat, and Canada field peas are up to a good stand and look promising for a crop. The heavy growth of wheat, 5 or 6 inches high, on the most forward plots and fields, and rye, about 10 inches high on the plots, is now flattened to the ground with a heavy coat of snow.

The soil having been continually sticky-wet below 1 inch, there has been no opportunity for satisfactory field work. As a result, spring disking, plowing, and listing for row crops is further delayed. The only field work that could be done was an attempt to kill vegetative growth in alleys and roads. The effort, however, was almost fruitless.

HAYS,contd.:

In this vicinity cutworms have caused some damage to a few fields of oats and barley by cutting the plants off above but close to the ground. A small army of them were found on one of the Experiment Station fields. The worms apparently came in from the adjoining pasture. An application of poison mash stopped the invasion.

Trees along the creek are slowly developing some leaves, the most forward being the boxelder. The ash and American elm are showing some green. The Chinese elm trees that were not badly damaged by the November freeze are also starting leaves. Plum trees are coming into bloom and redbud is showing a little red.

Maximum temperature, 78°; minimum, 32°; precipitation to 8 A.M. April 12, 1.04 inches including 1 inch of snow.

GARDEN CITY:

A week of warm growing weather with four days of high winds caused much of the earlier wheat to wilt during the day. On Friday night, April 18, a 4 inch wet snow yielded 0.43 inch of water which should be fit spring seeded grains and afford temporary relief to wheat where soil moisture is low. Later seeded wheat and wheat thinned by the November freeze is making remarkable headway and is now showing to much better advantage than earlier in the season.

Warren L. McMillan, Professor of Animal Husbandry, Goodwell, Okla. was a station visitor.

Maximum temperature, 78°; minimum, 29°; precipitation 0.56 inch.

TUCUMCARI:

Rather consistently high wind movement has prevailed the past week and the month to date has averaged higher than any month since March 1938. Fruit buds and blooms have not been frost damaged. Precipitation of 0.45 inch last Sunday was the only rain this month, but following the heavy winter precipitation it placed the fields in excellent condition.

Messrs. Smith and Powers of the Soil Conservation Service spent portions of two days on the station, making cooperative grass seedings on various types of cover. The majority of the April 1940 grass plots show fair to good stands.

Station work included fence removal and building, painting and repair of window screens, and early cultural work.

Maximum temperature, 84°; minimum, 33°.

BIG SPRING:

Rains varying from 0.21 to 1.36 inches were received on three nights during the week for a total of 1.86 inches. These rains together with that received in March should have the subsoil pretty well soaked up.

The pastures are greening up rapidly; this with an abundance of wild flowers in blossom presents a very pleasing picture.

Sudan grass planted last week has emerged to good stands on the Station; this is the main crop being planted throughout the county at this time, although some are starting to plant cotton. The soil is too cold for cotton, but the farmers can hardly resist the temptation to plant when a few warm days appear and there is good soil moisture.

BIG SPRING,contd.:

Station work has consisted of threshing milo for the cattle feeding work, harrowing fields to prevent soil blowing, and staking and trimming wheat plots.

Maximum temperature, 89°; minimum 49°; precipitation, 1.86 inches.

LAWTON:

Rains were quite general in the State during the past week, varying from heavy downpours to gentle showers. Station records include precipitation on 4 dates totaling 2.09 inches. Temperatures fluctuated widely, 41° to 83°. Small grains, pasture grasses, and legumes made very rapid growth.

Fields of volunteer oats are in most instances pretty well headed. Coker-33-19 seeded in the winter variety test is fully headed, and several other varieties are on the verge of heading. Early Blackhull wheat is also heading quite rapidly. Plant growth in most wheat fields is very rank, standing from 36 to 42 inches as the heads first emerge. A very heavy infection of leaf rust is prevalent, and lodging is already extensive in low areas where vegetative growth is rank and lush.

Some of the rotation plots of corn emerged rather unevenly, due to drying of the surface soil, but stands will eventually be satisfactory.

WOODWARD:

Heavy rains totalling 2.51 inches attended by more or less run-off raised the reservoir level to 10.2 feet. Aside from some erosion on steeper slopes and along drainage courses, the precipitation was generally beneficial, especially to pastures, lawns, and shrubbery. Moderate temperatures prevailed with much cooler weather at the close of the week.

Field work was chiefly devoted to cultivating fallow, sorghum stubble, and other areas packed by rains and subject to blowing as soon as the surface dries. Corn plots in the D.L.A. project were planted on the 18th. Early rye varieties in the Cereal nursery have headed. Owing to very thick stands, wheat will require considerable moisture from now on if present prospects are to be fully realized.

The main parts of the dry-land and irrigated gardens have been seeded and tomatoes set out under several different types of protective covers. A new power sprayer was used immediately upon arrival for combating the worst infestation of tent caterpillars on trees and shrubbery in recent years. Cleaning up the campus, mowing lawns, and lining out miscellaneous nursery stock was in progress whenever conditions permitted. A number of hybrid poplars were transplanted in the Spring Creek arboretum area. Germination of juniper seed has been very good this spring.

On account of soil washing, it was necessary to uncover a number of transplants in the grass breeding nurseries. Western wheatgrass has made excellent growth thus far. With warmer weather most range species are also beginning rapid growth. Drilling seven wells was started at the Range Unit to provide stock water at several sites in connection with the experimental pastures.

Maximum temperature, 80°; minimum, 38°; precipitation, 2.51 inches..

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WEEKLY STATION REPORTS

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46148

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REPORT FOR THE WEEK ENDING APRIL 26, 1941.

HAVRE:

Ideal growing conditions prevailed. Wind velocities were normal, no soil drifting occurring. Only light precipitation was received. Freezing temperatures were reported on the first three nights of this week.

Work in the experimental field consisted of rod weeding, staking, and seeding of all wheat, oats, rye, and barley plots in the rotations. Forage rotations were also seeded. Spring rye was seeded in the spring versus winter rye test. Wheat was seeded in the erosion projects as well as in the new rotation and methods of fallow. The first date of seeding small grains emerged this week with good stands.

Seeding of oats was completed in the west strip field. Irrigation of the alfalfa fields was begun.

Three-day weights and body measurements were taken this week, which completed the record of performance trials with calves and yearlings. Calving is about two-thirds completed, with about a two to one ratio in favor of bulls to date. The yearlings were number branded, and both yearlings and two-year-olds were turned out on pasture. The recent moisture has benefited the range.

The renovation of the office and living quarters is still in progress with W.P.A. assistance. Excavation was completed for the cattle dipping vat.

Maximum temperature, 72°; minimum, 28°; precipitation, 0.01 inch.

MOCCASIN:

Conditions in the area greatly improved during the month of April and especially during this past week. Moisture in the form of rain totaled 0.28 inch. So far this month the precipitation has been greater than in January, February, and March combined.

The two groups of 12 animals each were placed on their crested wheatgrass (regular and rotation) pastures on the 21st. With the available moisture the grass should respond rapidly. No field work has been possible. Pine and cedar seedlings from the Northern Great Plains Field Station have been potted in cans.

Mr. G. W. Bingham, extension irrigation specialist from the Montana Extension Division of Bozeman was a station visitor on Thursday.

Maximum temperature, 64°; minimum, 15°; precipitation, 0.28 inch.

HUNTLEY:

The soil has dried off slowly after the heavy snow of a week ago, and most of the water has entered the ground. Runoff was checked to a large degree by cool days and freezing temperatures at night.

Field work has been held by the wet soil, but some weed-burning and cleaning jobs were possible at the close of the week. Crested wheatgrass meadows were mowed and raked to remove the fall growth of grass and weeds that was not grazed or burned off last year.

HUNTLEY, contd.:

Owing to cold weather rains made much progress during the week. Spring grains have germinated, but very few seedlings have emerged. Cutworms are reported from nearby farms, and some slight damage has been done to winter wheat. On the plots little injury is noticeable, although a few cutworms are present. Most of the worms found were large and appeared to be about at the end of the larval stage.

Maximum temperature, 69°; minimum, 23°; precipitation, trace.

SHERIDAN:

Temperatures over the greater part of the week were somewhat above the average for the period, with considerable cloudiness and a few light showers the last two days. Plant growth was rapid. Early sown grain in the bulk fields and the first date of seeding, and sweetclover broadcast early in March have emerged; grasses sown late in March have partially emerged, and wheat and barley in the rotations ar just beginning to show.

Seeding of grain, except late dates of seeding, was completed. Replacements for fruit and shelterbelt plantings were planted, sheep were sheared, and Russian thistles raked and burned from the most of the remainder of the station fields. Early garden plantings were completed.

Maximum temperature, 67°; minimum, 20°; precipitation, 0.10 inch.

DICKINSON:

Cool weather the first of the week with light showers and heavy frosts at night held vegetation back. Warmer weather the last three days was favorable for growth, and vegetation made some advancement.

Wheat seeded on the rotations April 3 is emerging, and the oats, barley, and peas seeded the 11th and 12th are also beginning to show up. A few farmers are now through seeding wheat, but considerable remains on gumbo and other heavy soils.

An increase plot of Spartan barley was seeded. Some clean-up work was done in the orchards and shelterbelts. Cross plots in rows and increase fields of crested wheatgrass in rows were cultivated to remove the thick stand of seedlings which developed after the heavy rains last fall.

Maximum temperature, 66°; minimum 20°; precipitation 0.05 inch.

Precipitation to date in April 1.68 inches; normal for the full month 1.25 inches.

MANDAN: Arboriculture

Shipping of nursery stock was completed the early part of the week. Russian-olive, ash, hackberry, honeysuckle, boxelder, American elm, and Chinese elm seed have been planted in the nursery. Replacement trees have been sent out in various station plantings. Moisture conditions are favorable for seed germination but are not so good in some places for planted trees.

Horticulture

Potting of cannas and geraniums has been completed in the greenhouse. Vegetable plants for garden work have been transplanted. Raking of lawns and cleaning up of shrubbery and flower borders on the grounds have been completed. First planting of vegetables in the acre garden was done on the 22nd. Lawns are slowly greening up and some shrubs and trees leafing out. There appears to be little winter injury in the various groups, but a number of shrubs are now old and

MANDAN,contd.:
should be renewed.

Fruit trees were shipped to horticultural cooperators on April 26th. A few of the newer Canadian varieties were included in the stock sent out this year. Planting of trees was continued in the orchards and nursery during the week. Plum pits and other seeds have been planted.

Agronomy:

The past week was favorable for field work on most days, and work progressed normally. Wheat was seeded on the 22nd. The average date of seeding is the 18th. The date of seeding was the latest since 1923. With the favorable moisture, it is likely the crop will be up sooner than during some other years with an earlier seeding. Oats was seeded on the 24th, while the average date is the 20th.

Crested wheatgrass is making a rapid growth. In the pasture it is practically ready for grazing.

Maximum temperature, 69°; minimum, 24°; precipitation 0.02 inch.

BELLE FOURCHE:

Generally fair weather, strong winds, and moderate temperatures were favorable to drying of the soil, and field work was resumed during the middle of the week. Wheat, barley, oats, flax, field peas, alfalfa, and sweetclover were seeded on rotation plots. Other work included seeding of dry-land barley varieties and raking and burning Russian thistles.

Temperatures became warmer towards the close of the week, and growing crops made noticeable progress. Stands of winter rain continue to improve, but recovery of winter wheat on two plots where pheasants did extensive damage remains doubtful. Crested wheatgrass and bromegrass made very rapid growth, and satisfactory stands of grass seeded early in February have developed on all plots.

Maximum temperature, 71°; minimum, 27°; precipitation, 0.12 inch.

ARCHER:

The weather during the week was clear but rather cool. These conditions retarded plant growth but permitted field operations.

Field work started the afternoon of April 22 and has proceeded uninterruptedly. All spring plowing and duckfooting in the rotation plots have been completed, and the plots are being staked preparatory to seeding. The seeding of grasses in the methods and dates of seeding experiment was completed, and spring cereals in the forage experiment have been sown.

Maximum temperature, 63°; minimum, 19°; precipitation, trace.

NORTH PLATTE:

The weather during the week was cool, and the small grain and grass did not make much growth. The winter wheat has made a growth of 5 to 6 inches, and the spotted stands make the plots look quite ragged. The sweetclover and alfalfa are emerging, and there is a good stand of grass on the plots seeded this spring. The plots in which a mixture of western wheat, crested wheat, and brome were seeded have a better stand than the plots of pure brome. The potatoes were planted on Tuesday, and the ends of the plots have been trimmed.

NORTH PLATTE,contd.:

The water in the snow which fell last Sunday amounted to 0.28 inch. The high wind which accompanied the snow caused considerable drifting. All highways were blocked by late Saturday afternoon, and in places so many automobiles were stalled that the snow plows could not clear the roads before Sunday afternoon. Temperatures were about freezing, and no one suffered from the storm.

Dr. H. M. Tysdal visited the station on Monday and made arrangements for seeding an alfalfa nursery.

Maximum temperature, 68°; minimum, 30°; precipitation for the week 0.35 inch; precipitation for the month to date, 3.53 inches.

AKRON:

Precipitation on the station during the week was limited to three trace rains. Light, closely restricted thundershowers occurred in different parts of the region. Winds have periodically been rather high, mostly from the south and southeast, with dust spots showing along the horizon.

Spring grains are only well emerged. Stands will apparently be satisfactory on the rotations, the varieties, and the nursery. Winter wheat and rye are very vigorous and rapidly approaching the jointing stage. Winter wheat has tillered profusely, and a common complaint is that it is too thick. It actually looks now as if winter wheat harvest will be greatly in advance of that for oats and barley. Russian apricots in the border plantings are in full bloom. Numerous birds arrived during the week, among them the first observed mocking bird.

Rotation roads were trimmed and given the first cultivation to eliminate the wheat and rye. The new 20 acres was subsurface tilled in an effort to eliminate volunteer wheat which did not show uniform enough stand to leave.

Asa Hepperly called to pick up stocks of grain sorghum seeds. Messrs. Reid and Paulson of the Federal Crop Reporting Service, also called.

Maximum temperature, 70°; minimum, 24°; precipitation, trace.

COLBY:

There has been no precipitation since the snow storm of last Saturday. The weather has been mostly cool and cloudy. Temperatures of 28°, 27° and 29° on the 19th, 20th and 21st respectively, caused much concern about the winter wheat and other small grains. Snow covered the ground on the 19th and 20th, but the ground was bare on the 21st. No damage was apparent until the weather cleared up. Gradually it became apparent that the spring small grains were frozen almost to the ground, except where they had come up early in March. The winter wheat, which was jointing in most fields drooped considerably and began taking on a somewhat whitish cast, and the tips of many of the leaves turned brown. Spots on most leaves looked like hail damage from hail which fell the night of the 18th.

Toward the end of the week the spring small grains began to green up again, and the winter wheat straightened up and appears to be making normal growth again. Many farmers believe that more damage will show up when the wheat is headed.

No field work was possible during the week on account of wet condition of the ground. Farmers are very anxious to get into the fields so as not to be out of compliance with the AAA program.

Maximum temperature, 74°; minimum, 27°; precipitation, 0.39 inch; 3.5 inches of snow.

GARDEN CITY:

The week ending April 26 was one of variable weather. Following the snow storm of last Saturday were two days of high winds which quickly melted the snow, but little or no run-off occurred.

Field work for the week consisted of cultivating plots for weed control in practically every series. Soil samples were taken on the tillage methods plots for winter wheat. During the 20-day interval since last sampling, soil moisture has been maintained remarkably well in the face of hard winds and rapid growth, there now being approximately 1 inch less available water. The wheat has been jointing, and the plots with poor stands and appreciable winter killing have made remarkable headway.

Maximum temperature, 73°; minimum, 27°; precipitation 0.08 inch.

TUCUMCARI:

The week was cool, calm, cloudy, and marked by frequent showers Precipitation on six days totaled 1.20 inches, bringing the total for the month to date to 1.65 inches, for the year to date 5.11 inches. The long-time normal for the first four months of the year is 2.83 inches.

Early wheat only moderately infested with cutworms should outyield earlier estimates. Ranges are certain to be better than in years, and row crop prospects are likewise much improved.

No station fruit has been frost damaged. Grapes are showing small leaves, and blooming will not occur for some few weeks. A great amount of shade tree pruning has been done, for Chinese elm and other trees show more dead wood this spring, as the result of accumulated drought of the past several years, than in any previous year.

Very little field work has been performed, but will be resumed when fields dry sufficiently.

Maximum temperature, 63°; minimum, 34°.

DALHART: (April 1 to 12)

This period furnished a continuation of the spring blowing. Four of the eleven days were characterized by severe soil blowing, on one day the blowing was moderate, and on two of the other six days there were dust flurries during part of the day. No precipitation was received.

Most of the spring replanting of trees and shrubs has been completed. A grass planting of 15 varieties was made on denuded pasture land on the station. These were made in duplicate, part (one-half) of this planting was mulched with old sorghum stover. One afternoon this week observations were made during a field scale planting of grasses by the Nursery Section of the Soil Conservation Service.

Maximum temperature, 77°; minimum, 32°; precipitation, trace.

DALHART: (April 19)

A rain of 0.91 inch was received the night of April 12. This rain came in a short time, and there was rather a large percentage of runoff. For the first time in two years water ran down the canyon. This run was of short duration. From reports the station was near the eastern edge of this rain. Larger falls were received both north and west of the station, ranchers reporting from 2 to 4 inches in the area of greatest fall.

DALHART, cont'd.:

Weeds are now getting well established except on bare land. The station fields were strip cultivated during the week. Soil samples taken during the week show the first six feet to be fairly well filled with water.

Soil blowing, which has been a problem but not a menace this spring, continues. There were 3 days with severe soil movement, the 12th, 13th, and 16th, and there were dust flurries on the 17th and 18th. Note that soil blowing was bad on the day following the heavy rain. This soil blowing is more localized than in some of the preceding years. An area east of Hartley was observed to be blowing rather badly on both the 15th and 16th.

The first cold temperatures of the month were recorded this morning. Just before dawn a snow which furnished 0.02 inch of water fell. It remained on until midmorning.

Maximum temperature, 79°; minimum, 31°; precipitation, 0.93 inch.

DALHART:

Two rains have furnished a total of 0.79 inch of water, and it is still raining today. The surface soil is now mushy wet, and the first six feet of soil is filled with water.

Russian thistles and native grass are now showing green; with few warm days their growth should be quite rapid. Cherry trees are now in full bloom.

Work during the week has consisted of disking and listing the spring-worked plots, cultivating the winter rye from the conifer planting, working roads, hauling blow sand, trimming dead branches from trees, and removal of dead trees.

Maximum temperature, 66°; minimum, 31°; precipitation, 0.79 inch.

BIG SPRING:

Weather for the most part during the past week was damp and cloudy. Very little sunshine and very little rain until the night of the 25th when 0.46 inch was received. This made a total to date for April of 2.32 inches. The rains this spring have fell slowly and should have put a good supply of moisture in the subsoil.

The winter wheat plots are in full head now, and give promise of making one of the few good wheat crops produced here. The trees are in full leaf, and spring flowering shrubs are putting forth an abundance of flower, all of which are making a nice showing on the grounds.

Weeds and Rescue grass have also been making a good growth, and have been quite a problem in the lawns and among the shrubs.

Station work has consisted of knifing; lister, beds in an increase field, planting the first date of cotton, in hoeing weeds from evergreens and tree rows.

J.H. Jones of the Animal Husbandry Division of the Texas Station was a Station visitor during the week.

Maximum temperature, 78°; minimum, 46°; precipitation, 0.46 inch.

WOODWARD:

Cool weather prevailed during the entire week, the mean temperature of 51° being 9° below normal. Only light precipitation in the form of scattered showers was recorded. Conditions continue very favorable for the growth of all vegetation.

WOODWARD,contd.:

Field work in the DLA project included one way disking, listing, and plowing for early fallow. A thick stand of winter rye was turned under in the green manure rotations. Some volunteer rye has been rogued from certain wheat plots. Roadways were cultivated and graded.

Shrubbery plantings have been made in the first of the new acclimatization blocks as part of the revised landscape plan for testing nursery material. In connection with this particular area, several selections of buffalo grass will be used in a study of types best suited for lawns. Many species of Syringa are blooming profusely. Numerous other flowering ornamentals about the station premises have attracted hundreds of visitors this spring. The drainage courses between the conifer nursery and hill top reservoir was strip sodded with buffalo grass and cross plantings of iris and ephedra made to control erosion. A number of black walnut varieties were grafted. Iris are now coming into bloom. Spraying for the control of tent caterpillars was continued where necessary.

Drilling grass in rows for increase seed production on the SCS farm is in progress. Older stands received a first cultivation, and certain blocks of spreading grasses were hoed. Texas bluegrass is heading. Stands of various grasses seeded earlier this spring for the most part appear to be satisfactory except where dashing showers after seeding buried the seed too deeply or caused crusting of the soil.

Maximum temperature, 70°; minimum, 35°; precipitation, 0.15 inch.

LAWTON:

Cool, cloudy, showery weather prevailed during the last week, materially holding up the progress of field work. Precipitation falling gently in drizzles and showers amounted to 0.55 inch. Maximum temperatures ranged from 55° to 74°, staying mostly in the sixties. The minimum was down to 45°.

Some of the wheat presents a poor appearance with a preponderance of rusty and dead leaves, while other plots are growthy and very dark green in color. Leaf rust infection developed very rapidly the past week, susceptible varieties carrying as much as 90 percent.

Practically all small grain plots carry a light infestation of greenbugs. Definite injury is not yet evident and Lady bird beetles, predators of the greenbugs, are quite numerous. Small grains would be greatly benefitted by warm temperatures and an abundance of sunshine.

Practically all the winter oats and all the winter barley varieties are heading and in a few instances are fully headed.

All plots of kafir, feterita, and sorgo were planted in Field A on the 26th and 27th. Seed beds were excellent except for soil temperatures which are lower than desired. Sorghum planting as early as possible seems desirable this year because of the extreme infestation of chinch bugs in small grains. Migration of overwintering chinch bugs was about two weeks late this spring, and deposition of eggs appears to have been somewhat delayed by cool weather.

HAYS:

The weather has been partly cloudy and cool, with one shower. The top soil remained so wet, however, that only the shallowest of tillage work could be done and not much of that. As a result the spring plowing for row crops is not yet done.

HAYS,contd.:

Wheat continued making a heavy growth. All wheat that escaped serious damage from the November freeze now has so much growth it is a burden to itself. Most of the wheat on the project reported a week ago as being lodged has raised. However, on many fields where the growth was heaviest much of the wheat is still down and tangled. The weather has been very unfavorable for the heavy wheat but exceedingly favorable for the late wheat, also the redrilled wheat seeded in January and February, and the wheat that was so thinned by the November freeze it seemed impossible for it to survive weed competition. In this vicinity the first crop of weeds was killed by frost and a second crop has been stunted by the cool weather. The wheat now nearly covers the ground, and the weeds are almost out of the picture. Reports coming in indicate that weeds may yet be a problem in some parts of the State.

On fallow wheat growth is very heavy and from 8 to 12 inches high. On other methods of seed-bed preparation it is nearly as high but the growth is not quite so heavy, - even on sorghum stubble the growth is very good. The stubbled-in-wheat is not so heavy and is of a much lighter color.

Rye has entirely recovered from the lodging reported a week ago and is about 24 inches high. It should have been plowed under, but the plowing has been delayed on account of the wet weather. Barley, oats, spring wheat, and Canada peas show no ill effects from the storm of a week ago and all these look promising.

The annual boys and girls judging contest was held on the Experiment Station Friday and the annual feeders' day program is being held today. The attendance record for the boys and girls contest was broken on Friday, and there is a good attendance at the feeders' day program.

Maximum temperature, 70°, minimum, 32°; precipitation, 0.29 inch.